

What is claimed is:

1. A substantially purified polynucleotide comprising a gene that is coexpressed with one or more neurotransmitter-processing-specific genes in a plurality of biological samples, wherein each neurotransmitter-processing-specific gene is selected from the group consisting of L-tyrosine hydroxylase (TH), aromatic amino acid decarboxylase (AADC), dopamine β -hydroxylase (DBH), nicotinic acetylcholine receptor $\alpha 3$ subunit precursor (nAchR- $\alpha 3$), secretogranin I and II, Rab3a, human cocaine and amphetamine regulated transcript (hCART), vesicular monoamine transporter 1 (hVMAT1), and ARIX homeodomain protein.

2. The polynucleotide of claim 1, comprising a polynucleotide sequence selected from:
- (a) a polynucleotide sequence selected from the group consisting of SEQ ID NOs: 1-5;
 - (b) a polynucleotide sequence which encodes the polypeptide sequence of SEQ ID NO: 6;
 - (c) a polynucleotide sequence which is complementary to the polynucleotide sequence of (a) or (b);
 - (d) a probe which hybridizes to the polynucleotide of (a), (b), or (c).

3. A substantially purified polypeptide comprising the gene product of a gene that is coexpressed with one or more neurotransmitter-processing-specific genes in a plurality of biological samples, wherein each neurotransmitter-processing-specific gene is selected from the group consisting of L-tyrosine hydroxylase (TH), aromatic amino acid decarboxylase (AADC), dopamine β -hydroxylase (DBH), nicotinic acetylcholine receptor $\alpha 3$ subunit precursor (nAchR- $\alpha 3$), secretogranin I and II, Rab3a, human cocaine and amphetamine regulated transcript (hCART), vesicular monoamine transporter 1 (hVMAT1), and ARIX homeodomain protein.

4. The polypeptide of claim 3, comprising a polypeptide sequence selected from:
- (a) the polypeptide sequence of SEQ ID NO: 6;
 - (b) a polypeptide sequence comprising at least 6 sequential amino acids of the polypeptide sequence of (a).

5. An expression vector comprising the polynucleotide of claim 2.

6. A host cell comprising the expression vector of claim 5.

7. A pharmaceutical composition comprising the polynucleotide of claim 2 in conjunction with a suitable pharmaceutical carrier.

8. A pharmaceutical composition comprising the polypeptide of claim 4 in conjunction with a suitable pharmaceutical carrier.

9. An antibody which specifically binds to the polypeptide of claim 4.

10. A method for diagnosing a disease or condition associated with the altered expression of a gene that is coexpressed with one or more neurotransmitter-processing-specific genes, wherein each neurotransmitter-processing-specific gene is selected from the group consisting of

5 L-tyrosine hydroxylase (TH), aromatic amino acid decarboxylase (AADC), dopamine β -hydroxylase (DBH), nicotinic acetylcholine receptor $\alpha 3$ subunit precursor (nAChR- $\alpha 3$), secretogranin I and II, Rab3a, human cocaine and amphetamine regulated transcript (hCART), vesicular monoamine transporter 1 (hVMAT1), and ARIX homeodomain protein, the method comprising the steps of:

- 10 (a) providing a sample comprising one of more of said coexpressed genes;
- (b) hybridizing the polynucleotide of claim 2 to said coexpressed genes under conditions effective to form one or more hybridization complexes; and
- (c) detecting the hybridization complexes, wherein the presence of the hybridization complexes correlates with the presence of the disease or condition.

15 11. A method for treating or preventing a disease associated with the altered expression of a gene that is coexpressed with one or more neurotransmitter-processing-specific genes in a subject in need, wherein each neurotransmitter-processing-specific gene is selected from the group consisting of L-tyrosine hydroxylase (TH), aromatic amino acid decarboxylase (AADC), dopamine β -hydroxylase (DBH), nicotinic acetylcholine receptor $\alpha 3$ subunit precursor (nAChR-

20 $\alpha 3$), secretogranin I and II, Rab3a, human cocaine and amphetamine regulated transcript (hCART), vesicular monoamine transporter 1 (hVMAT1), and ARIX homeodomain protein, the method comprising the step of administering to said subject in need the pharmaceutical composition of claim 7 in an amount effective for treating or preventing said disease.

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